CLAIMS

1-11. (canceled)

12. (currently amended) Filter device for molten steel filtration comprising a bonded network of graphitizable carbon fired in a non-oxidizing atmosphere at a temperature up to 1000°C, the filter device comprising a protruding frame joining a plurality of sieve plates, each plate including a corrugated surface, the protruding frame and sieve plates defining a reservoir chamber, wherein the graphitizable carbon is present in a positive amount up to 15% by weight.

13. (previously presented) The filter device of claim 12, wherein at least one corrugated surface includes a surface corrugation from 0.1-10 mm.

14. (previously presented) The filter device of claim 13, wherein the surface corrugation is from 1-5 mm.

15. (previously presented) The filter device of claim 12, wherein each sieve plate defines a plurality of through holes, and the through holes of a first plate are spaced laterally from the through holes of a second plate.

16. (previously presented) The filter device of claim 15, wherein the through holes have a diameter from 1-10 mm.

17. (previously presented) The filter device of claim 16, wherein the through hole diameter is from 2-5 mm.

18. (previously presented) The filter device of claim 15, wherein the through holes comprise a shape selected from the group consisting of circular, elliptical, triangular, square, rectangular, pentagonal and hexagonal.

19. (previously presented) The filter device of claim 12, wherein the sieve plates include a substantially an identical geometry.

20. (previously presented) The filter device of claim 12, wherein the filter comprises a ceramic raw material.

21. (previously presented) The filter device of claim 20, wherein the ceramic raw material includes reinforcing fiber.

22. (currently amended) A method for producing a filter device comprising a bonded network of graphitizable carbon, the filter device comprising a protruding frame joining a plurality of sieve plates, each plate including a corrugated surface, the protruding frame and sieve plates defining a reservoir chamber, the method comprising:

a) pressing a semi-damp mixture comprising ceramic powder and a graphitizable bonding precursor and fibers to obtain a first and second perforated sieve plate, each plate having a disk shape, a protruding frame, and corrugated surface on at least one surface;

b) forming an assembly by joining the first and second perforated sieve plates by the protruding frames using a binder, whereby the plates and frame define a reservoir chamber; and

c) firing the assembly in a non-oxidizing atmosphere to a temperature up to 1000°C, wherein the graphitizable carbon is present in a positive amount up to 15% by weight.

23. (previously presented) The method of claim 22, wherein the binder is selected from a group consisting of ceramic or carbon.

24. (previously presented) The method of claim 22, wherein the non-oxidizing atmosphere is a reducing atmosphere.

25. (previously presented) The method of claim 22, wherein firing occurs between 600-700°C.

26. (previously presented) The method of claim 22, including roughening the corrugated surface.

27-28. (canceled)